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Village Market, Bolivia

The World's Food Potential

The Act of Bogota

Soviet Food Levels Lagging

UNITED STATES DEPARTMENT OF AGRICULTURE · FOREIGN AGRICULTURAL SERVICE

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Food and Population

One of the most controversial topics today is that of food versus population. Advances in sanitation and the reduction of infectious diseases have greatly increased the span of human life. This fact, along with a high birth rate, is causing the world's population to increase at an ever-accelerating rate. Recent figures released by the United Nations give 2,497 million as the world's population in 1950 and 3,828 million as the estimate for 1975.

Can the world step up food production to keep pace with this population expansion? Some scientists say no, that our agricultural resources eventually will prove inadequate. Some see hope in greater tapping of the vast reserve of marine life in the ocean beds.

The chemists have another answer. They claim that it is now possible to make all substances essential for human nutrition by synthesis. The raw materials required would be the chemical elements themselves or available materials containing these elements. Thus, our carbohydrates might be obtained from wood pulp, our fats from petroleum, and some of our proteins from synthetic amino acids.

Dr. Byron T. Shaw, in his article on the opposite page, is optimistic about the world's food potential for the foreseeable future. He believes that the world can feed itself for many years to come and that there are two ways of doing it—by increasing yields on existing cropland and by bringing new lands into cultivation.

Dr. Shaw also sees us entering the golden age of biological science. He predicts that as we gain a better understanding of the cell as the unit of life, we may acquire such mastery over biological behavior that the improvement in animal and plant life would far exceed anything now possible.

Cover Photograph

Women direct the trade at this village market in Bolivia, where rice is the principal commodity sold. Diets in much of Latin America are inadequate, a situation recognized by the Act of Bogota (see page 6), which points up the need for better use of farmland.

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Why the World Still Has A Big Food Potential

Byron T. Shaw, Administrator of USDA's Agricultural Research Service, in this talk delivered at the Fifth International Congress on Nutrition, says the world "has the natural and scientific resources to feed its people today and for many years to come."

At no time in history have all people everywhere been adequately nourished. Yet the world has the soil, water, and sunshine to produce much more food than is being produced today. We recognize, however, that it takes more than these physical resources alone to provide nutritious diets for everyone. Putting food on the world's dinner table requires the efforts of hundreds of millions of people, concerned not only with production but also with processing, distribution, and consumption of food.

The job deeply involves science and technology, applied on a worldwide scale. This in itself is difficult in the extreme. Even so, the technological problems may be easier to overcome than the educational, economic, and social or institutional barriers that stand in the way of developing an efficient agriculture throughout the world.

In seeking higher levels of food production, there are two obvious courses that can be followed. One is to increase yields on existing cropland. The other is to bring new lands into cultivation.

Increasing Crop Yields. Progress in several areas of the world has demonstrated that improved farming techniques can increase production enormously. In Europe, before the rise of agricultural technology, crop yields remained virtually unchanged century after century. Grain production, for example, remained under 10 bushels per acre from the time of the Roman Empire until just before the French Revolution. Then, with the development and adoption of better farming methods, production started to climb. Per-acre yields of many crops have more than tripled since 1800. In fact, with presently known scientific facts, farmers in most of northwestern Europe are now approaching the maximum in economically attainable yields in relation to soil resources.

In the United States, food production was increased for 300 years mainly by bringing new lands into cultivation. Significant increases in average yields per acre were not obtained until after 1940, when in order to meet the needs of World War II, farmers began applying on a large scale the results of research that had been accumulating for 50 years. Yields of most crops have been increasing since that time, and prospects are good for still further progress in the years ahead.

By taking into account yield increases that have been attained in the various soil and climatic areas of the United States, it is possible to assess with a reasonable degree of accuracy the yield potentials in other countries where similar physical conditions exist and where present yields are low. About 15 years ago, Department scientists used this means to project yields per acre and total world food production attainable by 1960. These estimates indicated that world food needs in 1960 could be more than met for roots, tubers, and sugar, and virtually met for cereals, fats, and oils. Attainable production of dry beans and peas, nuts, fruits, vegetables, and milk was estimated as likely to be short of 1960 needs.

Now that we have reached the year 1960, let us see what happened. In most parts of the world the production considered in 1945 as attainable by 1960 did not take place. But the greater-than-anticipated yields of commodities in the United States, plus the recent gains in production in Mexico, Japan, Turkey, the Philippines, and several other countries, indicate what could be done under reasonably favorable circumstances.

In the United States, the scientists *estimated* that by 1960 the yield of rice could be increased 13 percent; the increase has actually been 58 percent (1957-59 average). The projected increase for wheat was 18 percent; the actual increase is 90 percent. For corn, the figures are 31 percent estimated and 79 percent actual. And for potatoes, the yield increase considered attainable by 1960 was 23 percent, whereas the actual yield increase has already reached 137 percent.

Technological Progress. In considering production potentials in the United States, the scientists merely assumed a general acceptance of the technology then being used by millions of farmers. They did not take into account the greatly accelerated rate at which both existing and new technology would be applied. During these 15 years, the use of fertilizer has more than doubled. It is of better quality and is being applied with ever greater precision and effectiveness. Irrigation has been extended to humid areas to supplement rainfall during critical growing periods. Increasingly effective chemical and biological techniques have been devised for controlling insects, diseases, and weeds. New plant germ plasm for many parts of the world has been incorporated into our commercial crop varieties, making them more responsive to fertilizer, more resistant to diseases and other pests, and better adapted to soil, water, and climatic conditions.

Improvements in livestock and poultry breeding, feeding, and management have made it possible for farmers to obtain 13 percent more pork per sow, 34 percent more milk per cow, and 36 percent more eggs per hen.

As a result of these and other applications of science and technology in the United States, fewer farmers, using about the same total acreage, are now producing about 60 percent more farm commodities than were produced during the period 1935-39. This compares with an increase of about 25 percent considered attainable 15 years ago.

The fact that wide variations in levels of production still exist in different areas of the world gives us reason to be optimistic about yield improvements in those areas where farm

output is now low. In 1957 the yield of wheat in Denmark was nearly four times the world average, six times that of India, more than eight times that of Africa, and twice the yield of wheat in the United States. The rice yield in the Far East, which equaled the 1957 world average and was nearly double the yield in Africa, nevertheless amounted to only half the average yield of rice in North America.

Certainly it is safe to say, in light of these figures and considering the technical knowledge available today, that the potentials for increasing production on existing croplands are significantly greater than they were 15 years ago. In fact, if we consider technical feasibility alone, it would be possible to meet and exceed present world food needs without adding any new cropland.

New Cropland. If we consider new lands that could be brought into production, the possibilities are even greater. Only about 10 percent of the total land area of the world is now in cultivation. Some 60 percent is in areas of perpetual snow and ice, tundra, mountains, and deserts. We can assume, for the present at least, that these areas have no practical possibilities for expansion of agriculture. This leaves about 30 percent of the world's lands—three times the amount now cultivated—that are not now in agriculture but which have soil, water, and climatic conditions that theoretically permit cultivation.

These lands are found mainly among the podzol soil groups in the north Temperate Zone and the red soils of the Tropics and subtropics. For each additional 10 percent of the northern soils that could be brought into cultivation, we would have 300 million new acres for food production. And for each 10 percent of the tropical and subtropical soils that could be brought into cultivation, about 450 million acres would be added.

Thus we have resources to feed a much larger population than now exists on the earth. But considering the rate at which the world's population is increasing, it is entirely possible that all available land will eventually be needed to provide enough food for all the people. The primary question, then, is, How can we attain the production potential of the world's available soil resources—both those now in use and those yet to be developed?

Each Farm Different. Up to now I have been talking largely in terms of averages—for countries, for soil groups, and for the world. We all realize, however, that food is produced on hundreds of millions of individual farms, each one different in some way or other. No farm family tills an "average" soil. Soils vary the whole way in productivity. Some are good to begin with, others can be built up, and still others may never reach high production.

Institutional needs such as credit, insurance, and marketing facilities, plus fertilizers, seeds, and pesticides, must be supplied, but they vary markedly with the different kinds of farm enterprises and the educational, social, and economic conditions that prevail locally. Also, farmers usually are conservative from necessity. Very few of them can risk their familys' welfare on an uncertain innovation. In many parts of the world, therefore, the farmer tends to follow the practices of his father and grandfather. This basis for decision must be changed, if he is to benefit from science and technology. To his experiences and tradition must be added knowledge and methods developed by other people and adapted to his own farm—whether it be a small mountain dairy farm, a tropical banana plantation, a grain farm on the plains, or a sheep ranch in the semidesert.

To take advantage of science and technology, most farming systems must be planned ahead for a period of years. The soils need to be improved, to be built up through combinations of such practices as liming, fertilizing, establishing grass meadows, planting shelterbelts, building stock ponds, using long rotations with grass or shade crops, and putting in devices for drainage and irrigation and for controlling runoff and erosion. Although these improvements may not result in substantial increases in production and net income the first few years, the eventual benefits will far outweigh the time and labor invested.

Some practices, of course, can bring immediate returns. On many farms, especially in underdeveloped areas, a profitable start can be made with new seeds of superior varieties of familiar crops, simple treatments to control diseases like smut of wheat, fertilizers and improved organic compost, better storage bins, and other simple improvements.

The importance of combining several practices for greater efficiency cannot be overstressed. In an experiment with corn in Punjab, India, for example, a local variety that produced 25 bushels per acre, when grown in the traditional manner, produced 28 bushels when fertilizer and water control were added. An improved variety grown in the traditional manner also produced 28 bushels per acre. But when this improved variety was given the proper amount of fertilizer and water, the yield of corn increased to around 100 bushels. Here in the United States, average corn yields in North Carolina have been increased 50 to 75 percent by combining high-yielding hybrids, greater plant population, and improved fertilization and soil management.

Transferring Techniques. Full account must be taken of the conditions existing both in the country where the technology was developed and in the country to which it is transferred. A good recommendation for the use of lime in one country, for example, may be ruinous in another country with different soils and different crops. Then, too, the use of one technique often depends upon the availability of other techniques. For example, many modern farm operations in the United States and Western Europe depend upon electric power, which is not yet available in many other places. Also, technical skills of farmers in a given area may not be adequate for a practice that is otherwise suited to them.

Therefore, if farmers, especially those in underdeveloped countries, are to progress in an orderly and effective manner, they must have advisory services that are based on knowledge of scientific principles combined with knowledge of local conditions. They cannot depend solely on techniques that have proved successful in other

places where conditions may be entirely different.

The laws governing the chemistry of soils, however, are the same in the United States, India, Argentina, Rhodesia, and everywhere else. With sound training in the basic sciences, technicians can analyze local problems and develop efficient methods for local use based on their knowledge of the basic principles involved in soil and crop management. Lacking knowledge of basic principles and of the scientific method, they are not likely to be very successful when working in an unfamiliar environment. This is as true of the U.S. technician who does advisory work in India as it is of the Indian student who is trained in the methods used in the United States and returns to do advisory work in his own country.

Even when basic principles are transferred from other countries, there must be scientists available with the competence to understand these principles and to interpret them for technicians who work directly with local farmers. In soil science, for example, many basic principles may be transferred from temperate regions to tropical regions that are valuable for the work at a research institute, but only a few that are directly appropriate to an extension program.

This means, then, that advisory programs for sustained high production depend upon effective research programs carried on within each country. We are apt to be most familiar with the work in northwestern Europe, Canada, Australia, and New Zealand. But South Africa has long been famous for research in the veterinary field and also has one of the world's leading citrus stations. Japan has excellent facilities for research on rice breeding and production. The tiny island of Fiji has three agricultural research stations.

These and other research centers are making important contributions, but the fact remains that in most of the underdeveloped areas of the world agricultural research facilities and personnel are sadly lacking. Perhaps even more serious is the relatively low esteem in which agricultural scientists are held in many countries. I believe that this unfortunate situation must change—that a well-rounded research program, supported alike by government and citizens, is an essential component of any country's endeavor to increase its production of food.

Biology's Golden Era. I am convinced that in research lies our greatest hope for eliminating hunger throughout the world. In my opinion, we are only now entering the golden era of biological science. It will unfold as we gain understanding of the cell as the unit of life. Such understanding will be particularly important to agriculture. If we can better understand and control the mechanisms and functions of living cells, we will have vastly increased ability to breed more productive, higher quality crops and livestock. We will be able to control or eradicate diseases and insect pests and to maintain the quality of farm products during processing and marketing. We will find new uses for farm-grown raw materials and improve human nutrition.

Recent evidence indicates that the gene may not be the fundamental unit of heredity, in terms of composition, but may consist of chemical subunits. An understanding of the chemical organization of these fundamental units, how they reproduce themselves, and how they produce their effects in the organism would provide valuable new methods of genetic control in plant and animal populations. If we can understand the chemistry of genes, we may learn how to modify them by chemical treatment. From this it follows that metabolic processes would become subject to modification.

The implications of such mastery over biological behavior are tremendous. If specific desirable changes could be made, the rate and amount of genetic improvement in animal and plant populations would far exceed anything that is now possible.

Distribution Channels. I have discussed some of the ways in which science and technology can be used to increase the *production* of food. But this food must also be *distributed* to millions of people living in towns and cities, and the distribution improvements required are as important as those involved in increasing food production and perhaps more difficult to accomplish.

In the first place, until distribution channels are available, farmers lack the incentive to produce larger quantities of products than can be used by their own families and perhaps their neighbors. By distribution channels, I mean not only transportation, storage, handling, and processing facilities but also reliable markets. Reliable markets mean customers with the ability to buy farm foods at prices high enough to give farmers a fair return on their labor. When it pays to increase food production, farmers generally seek ways to do it. This was the case in the United States during World War II, when the demands for food at home and abroad gave farmers the economic incentive to adopt technology as never before.

It is significant that the countries in which food output per acre and per animal has shown the greatest increase are, almost without exception, the countries in which highly developed industry and concentrations of people in cities have provided farmers with industrial goods needed for efficient production and with profitable domestic markets for their products. Thus, favorable social, economic, and institutional conditions are essential for efficient food distribution just as they are for efficient production.

I recognize that some countries depend on imports to supply a large part of their food requirements. But, in total, only a small percentage of the world's food has ever moved in international trade. That trade cannot be expected to meet the needs of countries having little to exchange, so that the solution to food shortages in such countries must be found largely within the countries themselves.

In closing, I would like to reiterate the thought expressed in my opening statement. I am convinced that the world has the natural and scientific resources to feed its people today and for many years to come. I am equally convinced that victory against hunger will come only as nations and individuals acquire the vision, the will, and the spirit of cooperation necessary to plan and carry out so great a task.

The Act of Bogota

—a dynamic program for the Americas

By Kathryn H. Wylie
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The American Republics reached another milestone in Hemisphere cooperation on September 12 when delegates representing 19 of them adopted the Act of Bogota. Cuba's was the only dissenting voice; the Dominican Republic did not attend the conference. This action is a new departure that goes beyond previous policies; also, it sets in motion new forces that could revitalize the Hemisphere.

The Act recognizes that preserving and strengthening free and democratic institutions requires that *individual citizens* of Latin America have an opportunity for a better life—and it recommends ways and means of accomplishing this goal. Since agriculture is basic to the economies of these countries, the acquisition of land, better utilization of land resources, and measures to help farmers on the land are all important to the new program. The agreement also calls for strengthening the Organization of American States (OAS) so it can play a vital part in implementing the Act.

Steps to Agreement. For some years both the United States and the Latin American nations have recognized the need to hasten economic and social development south of the border to give the exploding populations there more material and social advantages. More than 2 years ago the President of Brazil, Juscelino Kubitschek, proposed that specific actions be taken to bring this about. His suggestions have come to be known as Operation Pan America. Representatives of the 21 American Republics have worked together to hammer out a program that would be realistic and that would be one on which all countries could cooperate.

The United States has been a hard-working member of the Committee of 21. And in July of this year, President Eisenhower gave the needed push to the Committee's work by announcing that, because of his concern for the peoples of the Hemisphere, he was asking Congress for authority to provide assistance to Latin America in the sum of $500 million above existing loans and other aids. Congress authorized the President to present a plan for utilizing such funds to the third meeting of the Committee held in Bogota, Colombia, in September.

Agreement Provisions. The Committee recommended to the Council of the OAS measures to establish an inter-American program for social development, use additional resources to finance plans and projects of basic economic and industrial development, and strengthen the OAS so it can fulfill its responsibilities.

The delegations welcomed the decision of the U.S. Government to establish a special inter-American fund for social development, with the Inter-American Development Bank as the primary mechanism of administration. The fund will contribute capital resources and technical assistance on flexible terms to help Latin American countries that initiate or expand effective improvements and that employ their own resources efficiently to achieve greater social progress and balanced economic growth.

Measures for social advance considered by the delegates to be of paramount importance include improving rural living conditions, land use, housing and community facilities, educational systems and training facilities, and public health.

Specifically the Act points up the need to: Insure wider distribution of land ownership; provide adequate agricultural credit institutions; revise tax systems and fiscal policies to assure equity of taxation and encourage improved land use; promote land reclamation and settlement projects; and provide better homes, public utilities, and transportation, particularly for low-income families.

Measures for economic development are no less essential, but they are already being implemented to a greater degree. The Act recommends that efforts be expanded sharply to assure an orderly economic development, which must in the long run furnish the basis for any lasting benefit to the people of Latin America.

The OAS is one of the foundation stones on which success of the new program will rest. The Act recognizes the need to bolster the facilities of that inter-American body and give it technical, administrative, and financial flexibility to do a good job. By the middle of November, the Council of the OAS will be convening a meeting of senior government representatives to find ways to strengthen the Organization to further Latin America's economic and social development. Further, the Inter-American Economic and Social Council has been advised to organize an annual meeting of the American nations to review progress and chart future action.

Effect on U.S. Agriculture. The new program for the Americas presents U.S. agriculture with an opportunity to further share its knowledge and experience with its neighbors. In 1962—anniversary of the passage of the Homestead Act—the United States will have had a hundred years of experience in land settlement, better land use and distribution, and helping farmers to a better life. The mistakes and successes that have grown out of this experience are to be found in land-grant colleges and Federal and State Departments of Agriculture.

As agricultural-industrial output is expanded and diversified, trade with the United States should benefit. Over a long period—say, 10 to 20 years—the results of the new program on the economy of Latin America should produce a wider market for all goods, including those from the farm. Experience has shown that developed nations with high per capita purchasing power have been the principal export markets for farm products. The United States can expect a rise in Latin American demand for wheat, lard, fruits, and other farm items as a greater percentage of the people of the other American Republics participate more fully in the economic life of their nations and raise their productivity above present levels.

U.S. Fish and Wildlife Service

Emptying the cod catch into bins aboard a trawler in the North Atlantic, where large banks provide ideal fishing conditions.

Fishermen in the racks of a fishing vessel in the Pacific catch yellow-fin tuna from a surface school.

Food From the Sea

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During the last 5 years the world's fisheries have supplied 30–38 million tons of foods and raw materials annually. Although this contribution is comparatively small when measured in terms of production or value of the major grains, potatoes, beef, or milk, fishery commodities are important in the food supply of many peoples and fishing is a major element in the economy of several nations. Moreover, in contrast to agriculture, which has had the benefits of man's best in science and technology, fishing is still more or less in the "hunting stage" of development. The seas hold many mysteries for man, and it is generally believed that their potentials are only beginning to be tapped.

Foods presently lead the list of commodities obtained from the sea, as indicated by the following disposition of the 1957 world fisheries catch:[1]

	Million tons
Marketed fresh	14.52
Marketed cured	8.03
Marketed canned	2.97
Reduced to meal, oil, etc.	4.40
Marketed frozen	2.64
Miscellaneous uses	1.00

The world fishing industry, however, also was responsible in that year for these significant amounts of fish oil for cooking, industrial, and medical purposes, fish meals for livestock feed, fish fertilizers, shell grit, and similar shell products:[1]

	1,000 tons
Fish meals and solubles	1,499.3
Fish body oils	325.6
Aquatic animal liver oils	64.9
Miscellaneous aquatic animal oils	11.0
Aquatic animal fertilizers	52.8
Whale oil	434.5
Whale sperm oil	135.3
Whale meals, liver meals and solubles	102.3
Shell grit and similar fishery products	454.3

Small quantities of seaweeds are harvested along the shore of various parts of the world for food, fertilizer, or the agar-agar and iodine which they contain. Sponges and seal furs are other commodities taken in significant amounts. A vast array of minerals is known to exist in sea water, but only salt and magnesium are extracted in appreciable quantities.

Out of the more than 20,000 species of fish, man has gained taste or developed uses for only a few hundred. Japan, with the most diverse industry, uses about 400 kinds. Until post-World War II the seas accounted for around 90 percent of the total, but an increase in fresh-water fish culture, especially in the Orient, cut salt-water species to 84 percent in 1958. The major species comprising the world catch in 1958 can be grouped thus:

	Percent of total
Fresh water fish	16
Salmon, trouts, smelts, etc.	2
Flounders, halibuts, soles, etc.	2
Cods, hakes, haddocks, etc.	13
Herring, sardines, anchovies, etc.	21
Tunas, bonitos, mackerels, etc.	6
Mullets, jacks, sea basses, etc.	10
Sharks, rays, etc.	1
Unsorted and unidentified fishes	20
Crustaceans	2
Mollusks	6
Other	1

The Northern Hemisphere accounts for about 94 percent of the yearly catch. Intensity of fishing in the areas north of the Equator, rather than adverse fundamental biological conditions in Southern Hemipshere waters, appears to account for this disparity. Although Northern Hemisphere fishing is widespread, four major areas supply the bulk of the catch—the waters off east Asia, northwestern Europe, northeastern North America, and northwestern North America. These fisheries have the most ideal

[1] Yearbook of Fishery Statistics, 1958. Vol. IX. Food and Agriculture Organization of United Nations, Tables E-1, F-1.

combination of physical and human conditions. The mixing of warm and cold waters on extensive continental shelves favors an abundance of plankton. Large banks provide ideal feeding and breeding grounds. Harbors are numerous, and they border the principal populated areas of the world, with markets and labor near at hand.

The Major Fishing Nations. Actually all the nations of the world record some fish catch, but only 22 countries account for more than 225,000 tons, 15 record more than a half-million, and just 7 or 8 more than 1 million tons. Japan is the traditional leader. Short on land and long on people, this country long ago turned to the bounty of the surrounding sea to add to its food and raw material supplies. Sea pastures substitute well for lack of land pasture, and fish have come to supply about 85 percent of the animal protein in the diet of the people, as well as important quantities of fertilizer, oil, and other products for export. The total catch in 1958 was over 6 million tons.

Much of the Japanese fishing is in coastal waters, which account for at least 75 percent of the take. The people engaged in the various aspects of the industry number about 2 million and live in villages thickly strewn along the coastline. Their methods and equipment display a curious combination of ancient and modern, in part resulting from the antiquity of the activity and in part from the great variety of catch. Mechanization has been expanding steadily; out of 416,697 boats reported in 1956, 152,392 were power craft. Deep sea fishing is a large-scale business and tends to be centralized in a comparatively few ports which have easy access to the fishing grounds. The Japanese also engage in systematic cultivation of fish and shellfish, and in recent years, this activity has contributed 175,000 to 200,000 tons of food and raw material annually. Both salt and fresh phases are represented.

Communist China has made a great effort to increase output of its ancient fishing industry. United Nations estimates place its 1958 catch at 6.6 million tons, which, if accurate, would give China world leadership. The southeast coast, characterized by numerous indentations, dense population, and little agricultural land, is the long-standing and major area. Recently the Manchurian-based activity has been considerably expanded, as have both marine and fresh-water phases of fish culture.

India, recording about 1 million tons, Indonesia with about 725,000 tons, and the Philippines, North Korea, South Korea, and Thailand, ranging from 500,000 to 225,000, are other big fishing nations of Asia.

The seas of northwestern Europe are rich in fish, and all of the countries with coastlines have fishing industries. Norway (1.5 million tons in 1958) and the United Kingdom (1 million tons in 1958) are the leaders because of their adjacency to the principal fishing grounds. Norway's catch is dominated by herring, which are salted, smoked, or processed as sardines at two main centers, Bergen and Stavanger, and by cod which are caught primarily off the Lofoten Islands. Norway is also a leading whaler in Antarctic waters. The British fishing industry is concerned mainly with cod, herring, and haddock. Aberdeen, Hull, and Grimsby, the major ports, are in excellent position to tap the famous Dogger Banks of the North Sea as well as the fruitful grounds around the islands north of the British Isles.

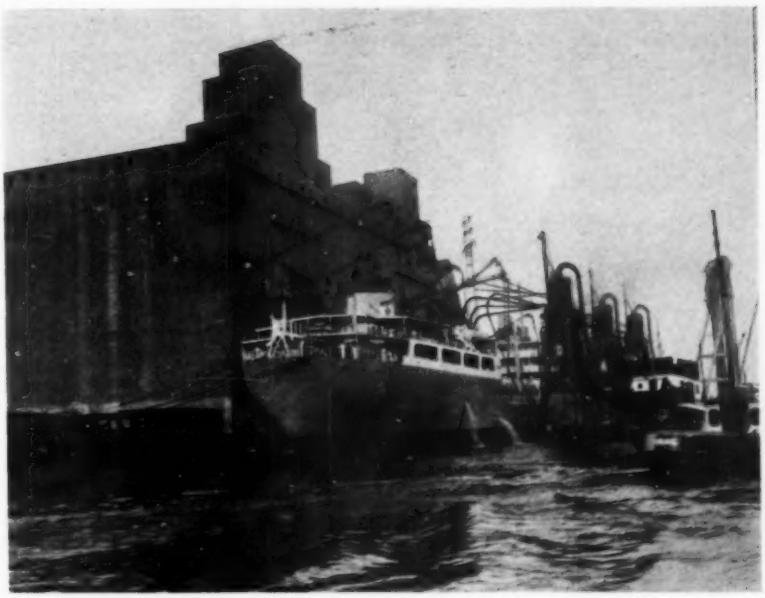
West Germany, sharing in the North Sea fisheries, catches 800,000 to 900,000 tons annually. Spain, Iceland, France, Ireland, Denmark, and Portugal, in order, range from 850,000 to 450,000 tons annually.

Large expanses of ocean waters on the borders of the USSR, the nation's numerous rivers, thousands of lakes, and the Caspian, Black, and Aral Seas provide some of the finest fishing grounds in the world. The estimated catch in 1958 was 2.9 million tons, sufficient to place the Soviet Union fourth among the fishing countries. Fish resources are owned by the state, with fishing carried on by fishing kolkhozes (collectives) and sovkhozes (state enterprises) organized along the same lines as their equivalent units in agriculture. Fishing in the western waters was well developed during czarist times. Under the Communist program of planned economy and country-wide development, the Far Eastern waters and the Barents and White Seas have been given particular attention. Activity also has been extended into international water, with whaling in Antarctica and fishing for Icelandic herring in the North Atlantic.

The United States and Canada share the rich fisheries off the North American continent, catching 2.9 million and 1.1 million tons, respectively, in 1958. Long coastlines provide varied habitat. The leading fish by weight in the U.S. catch are menhaden, for oil and meal, off the Atlantic coast, tuna off California and south to the Equator, salmon in the Pacific Northwest and Alaskan waters, and shrimp off the south Atlantic and Gulf coasts. Chesapeake Bay is famous for its oyster beds and California for its pilchard catch. Ocean perch, various ground fish, and lobster are taken off New England. In the Pribilof Islands the United States controls the major share of the world's fur seal resources. Canada's major fisheries are on the famous banks off Nova Scotia and Newfoundland, although there is also considerable fishing off the west coast.

World Trade. The international movement in fishery commodities involves a very small portion of the yearly catch, and the products shipped are mainly in processed form. Many countries sell small quantities of special products, but only a few are significant exporters. In fact, many of the exporting countries are net importers, including the United States.

Norway, with a big industry and a comparatively small population, has a surplus for sale and sends large quantities of herring to the Mediterranean Basin countries. Iceland, for similar reasons, has surpluses. Before World War II, Japan ranked as the world's leading exporter. Though its shipments included a variety of products, they totaled less than 10 percent of its yearly catch. The luxury items such as crab meat and tuna are sold to the United States, Canada, and the United Kingdom, while the cheaper products such as dried fish and meal go to Asian countries.



Germany's economic boom makes it a top market for agricultural imports. For example, its expanding livestock industry needs imports of feeds like the 18,000 tons of U.S. milo here being unloaded at a Hamburg grain elevator.

By Paul F. Taggart, Acting U.S. Agricultural Attaché Bonn, Germany

The Big West German Market

is worth the best efforts of U.S. exporters

A spectacular postwar recovery has given West Germany one of the strongest economies in Europe. It has a billion-dollar annual surplus of exports over imports and, as a result, now ranks as the Free World's second largest holder of foreign exchange.

In the past decade, Germany's total imports have more than tripled in value, and its imports of agricultural products have risen by 80 percent. Yet, though the United States last year supplied a larger share of these agricultural imports than any other country, the dollar value of its share rose only 8 percent during the period —from $349 million in 1950 to $376 million in 1959. To understand why this rise has been comparatively slow requires a closer look at the effect of some German farm and trade policies on individual commodities.

Grain. The German Government supports the price of grain as a matter of overall agricultural policy. Under grain marketing legislation, strict controls may be exercised. Prices of domestic grain are artificially maintained above world market levels. Prices of imported grains (except rice) are raised to the domestic level by equalization levies. Besides maintaining an artificial price, the government reserves the right to determine the amount, country of origin, type and quality, and shipment time of all grain imports.

In coarse grains the United States has held the lead among the some 30 countries supplying coarse grains to Germany, shipping in 1959 about 1.05 million metric tons, or about 38 percent of total imports. In recent years a preference for U.S. barley has developed. Feed corn and milo purchases from the United States have also stayed high. Prospects for continuance of a large U.S. share in total coarse grain imports are good. Much will depend, however, on the feed grain prices established in the European Economic Community (the Common Market). If these are high, production increases, particularly in France, would probably reduce dependence on imports from outside countries for the Common Market as a whole and Germany in particular.

On wheat, in addition to price and import controls, Germany applies milling quotas to secure the use of as much domestic wheat as possible. These quotas have been changed several times in recent years, each time to the disadvantage of imported wheat. At present, at least 75 percent of all wheat milled must be domestic.

On rice (paddy, cargo, milled, or broken), no import restrictions are now being applied, though it has not been formally liberalized. The first postwar long-term tender for U.S. brown rice was issued in mid-June 1958. Since then the United States has been a major German rice supplier; in 1959 Germany purchased close to 51,000 metric tons of brown rice from the United States. This amounts to about half Germany's import requirements, for little milled rice enters the country because of the high duty on that product.

Soybeans. German soybean imports have increased considerably during recent years. In terms of dollars, soybeans were the most important U.S. farm commodity Germany imported in 1959 (about $61 million).

For statistical background, see back cover.

Weighing U.S. tobacco in a Bremen tobacco manufacturer's warehouse. The United States may soon face even keener competition for the West German tobacco market.

In terms of tonnage, the U.S. share of German imports fell from 87 percent in 1958 to 75 percent last year when China again entered the West German market. However, Germany is still the second largest foreign buyer of U.S. soybeans. Germany has adequate crushing capacity, but the import of more soybeans depends on an expansion of the soybean meal market. The outlook is favorable, for Germany's need of protein feeds has increased as a result of the expansion of its livestock and poultry population, the introduction of improved feeding methods, and the gradual change from animal to vegetable feed supplement.

Cottonseed Oil. German imports of cottonseed oil from the United States amounted in value to $6 million in 1954. These imports doubled in each of the following 2 years and reached a peak of more than 118,000 metric tons or $40 million in 1957. In competition with soybean oil, which was gaining in popularity, and vegetable (coconut, peanut, and palm) oils from other countries, U.S. cottonseed oil sales to Germany fell in 1958 but were back up to $26 million (101,000 metric tons) in 1959. As this oil has become one of the major ingredients in the production of first-quality margarine, Germany will undoubtedly continue to provide the United States with a good market for it.

Livestock Byproducts. Germany's imports of hides and skins, frozen variety meats, fatback, tallow, lard, and sausage casings from the United States averaged about $42 million during 1956 through 1959—more than 10 percent of the total value of agricultural products supplied by the United States during this period.

For hides and skins, there should be an increase in the U.S. share of total German purchases if, as reported, Argentina's cattle slaughter is actually sharply reduced.

For frozen variety meats, a further increase in U.S. exports to Germany may be expected, provided they are competitively priced. German consumption is still trending upward.

For lard, the U.S. export outlook in Germany is not too bright in view of the proposed Common Market tariff, which would be prohibitive for lard imports from outside countries.

Frozen Poultry. The development of the market for U.S. frozen poultry in Germany is a striking example of successful market promotion work. Frozen poultry from the United States, mostly chickens and turkeys, was introduced into Germany through a $1.2-million P.L. 480 program in March 1956. In less than 4 years, the U.S. share in German poultry imports has grown from zero to 20 percent. In 1959 these imports of U.S. poultry approximated 21,000 metric tons and were valued at $12.4 million. The United States during that year was the second major source of German poultry imports, surpassed in volume only by Holland (about 37,000 metric tons valued at $24 million) and closely followed by Denmark (about 19,000 metric tons valued at $13 million). Future prospects for U.S. poultry on the German market are bright.

Fruit. The U.S. exporters' share in the German fruit market has increased considerably during the past 5 years. Because of the excellent quality of their canned fruit products and their position as main supplier of citrus juice (single-strength and concentrated), they now furnish over one-third of Germany's total canned fruit and juice imports. Principal U.S. products on the German market are canned peaches, canned Hawaiian pineapple, and single-strength citrus and tomato juices. The U.S. share of apple, pear, fresh citrus, dried fruit, and nut imports into Germany depends primarily on weather as it affects domestic production and the price of fruit in nearby countries.

Cotton. The share of U.S. cotton in Germany's total cotton imports has varied widely over the past 5 years, mostly owing to changes in the price relationship between U.S. cotton and comparable growths from other countries. Germany has no restrictions on cotton imports, and the U.S. share in the German cotton market will continue to be largely determined by price considerations.

Tobacco. During 1953 to 1959, total German tobacco consumption increased from 182 million pounds to 240 million pounds. The usage of American leaf increased during that period from around 60 million pounds to about 70 million pounds. The outlook for American tobacco in the German market depends on consumer preference and cost developments, among a number of other things. The tobacco production potential of the European Economic Community, particularly Italy, as well as that of the associated overseas territories, will

(Continued on page 20)

Through Kenya's Livestock Country by Jeep

By Gordon R. Schlubatis
Agricultural Officer, Nairobi

White Boran cattle move across the grasslands at the foot of the Aberdare Mountains. Borans are being crossed with Santa Gertrudis to obtain a quickly maturing animal.

Kenya is well known for the coffee, tea, sisal, pyrethrum, and fruits that grow in the fertile, high-rainfall areas, which make up some 40 percent of the Colony's central and coastal regions. Little publicity, however, has been given to the livestock farming of Kenya, and to learn of it means safaris into the less-traveled parts of this fascinating land.

We went on just such a trip last spring, which took the form of a jeep tour through the grasslands of the Upper Rift Valley and the semidesert country of the Northern Frontier Province. We were joined by Dr. I. Mann, a veterinary officer of the Kenya Government, and his family at Rumuruti, then later by the former District Commissioner of Samburu, Terry Cavaghan and his wife. Our rendezvous was the Carr Hartley game farm, famous as a place where all kinds of game animals may be purchased and shipped throughout the world.

We traveled in two vehicles—nine people, food, bedding, petrol, and water, for a 6-day venture into new and primitive country, with each mile a challenge and a reward. Our route led from Nairobi, through Nakuru, Thomson's Falls, Rumuruti, Maralal, Baragoi, South Hor, and finally to Lake Rudolph. This is a beautiful, treacherous, and windswept tract of water, stretching 175 miles to the north into Abyssinia and with more fish in it than in an angler's dream. After the last 20 miles along the east shore of the lake, 20 miles of unbelievably bad and boulder-strewn tract cut by deep-sided gorges, we set up our camp under the palm trees and bathed in a sparkling clear stream, cold, but most refreshing.

Lovely as this sounds, we were not vacationing or on holiday. Our interest was in the land and its potentiality as a grazing country. From Rumuruti to Lake Rudolph is Samburu tribe country, and like their Masai cousins, the Samburu are purely pastoralists. The people know the country and carefully shift their herds of zebu cattle, sheep, goats, and camel from waterhole to waterhole, seeking new grazing. Cattle numbers are not large in proportion to the vast area, as it requires from 15 to 30 acres to provide for one beast. In all, there are about 350,000 head in this area. Government experts are helping by teaching disease control, breeding methods, and range management, and providing new water points in the form of dams and boreholes.

These nomadic tribes are also learning to market their surplus stock. The government supervises periodic sales held at strategic points throughout the grazing area, and the village of Maralal was having such a sale as we passed through on our return trip. Cattle only were being sold. It was a real sight. The Samburu and Turkama men and women, in their beads, bangles, and skins, were milling about with their cattle, chatting with friends, collecting some cash, and paying debts or buying up supplies at one of the several "dukas" (stores). The cattle were appraised and bought by a government veterinary officer, then were sorted and disposed of as (a) poor quality for hide, bone, and meat meal, (b) immature stores purchased by feeders to be put on better grass, and (c) well-developed cattle to be slaughtered for consumer trade.

Following the sale the cattle went to Hingo, 20 miles from Maralal, where they were checked by veterinary officers for disease and inoculated for anthrax, black quarter fever, rinderpest, and foot-and-mouth disease. If found fit the very thin cattle (i.e., class A) move on the hoof for slaughter at the Veterinary Department field abattoir at Archers' Post, 80 miles to the east. Here, the poorest quality cattle are converted into stockfeed, such as blood meal, meat meal, hoof and horn meal, and tallow. The hides are carefully prepared and sold by auctions, and the bone meal is made into a complete cattle lick and sold cheaply to African stock owners.

The immatures go to Kirimu, a 44,000-acre holding ground, from whence they are sold to European farms for further grazing, while some go to the nearby 40,000-acre ranch run for the Samburu tribe by the Veterinary Department as a money-making project. The slaughter cattle

go on the hoof or by truck 250 miles to the Kenya Meat Commission packing plant near Nairobi, which has full facilities for slaughtering, chilling, freezing, and canning.

Our traveling companions left us as we came back through Maralal, and we spent 2 additional days visiting the ranches of Europeans in the Laikipia district, north of Thomson's Falls. What a contrast! Well-bred Boran cattle and Merino sheep ranging on well-watered, fenced grassland. Regular inoculations against rinderpest and foot-and-mouth, also dipping 3 to 4 times a month to control the fever-bearing cattle ticks.

A few Santa Gertrudis cattle have been brought from Texas to two ranches in Kenya. On one, Major J. B. Fermor-Hesketh of North Narok has 8 bulls and 15 heifers of this breed. It is a ranch of 34,000 acres on which the owner has just completed many improvements—125 miles of fence, 20 miles of 2-inch water piping, 10 large water supply tanks, and some new housing.

One of the best managed ranches in Kenya is that of Miles Fletcher of Ngobit—40,000 acres, with 12,000 Merino sheep and 3,000 well-bred Boran. He also has 8 head of Santa Gertrudis cattle. Both ranches are doing an excellent job with their cattle and sheep. The Santa Gertrudis are thriving on this high, dry-grass country, and it is anticipated that a more quickly maturing beast will result from crossing them with good Boran cattle.

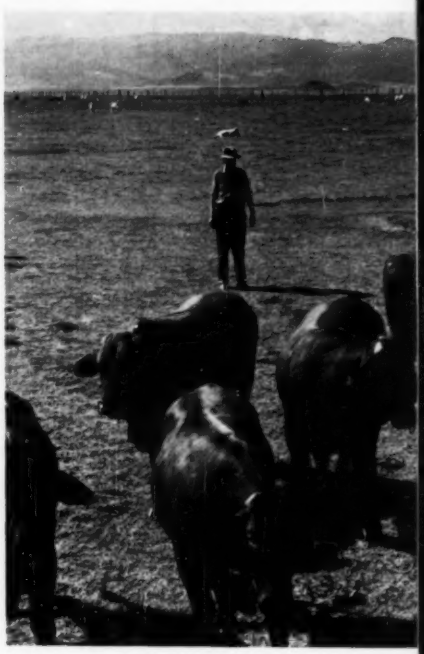
The total number of cattle, beef, and dairy stock on European lands amounts to over ¾ million head, while the Africans own over 6¼ million head. Nearly all the beef cattle, whether owned by Africans or Europeans, are East African humped zebus. The European-owned dairy stock are grade animals—Ayrshire, Holstein, Guernsey, and Jersey. In African areas, until recently, there were no European breeds; now, however, following consolidation of their lands, African farmers are developing a dairy industry based principally on Guernseys, with the Kenya Veterinary Department providing a growing cover of artificial insemination to meet their needs for high-yielding livestock.

The Veterinary Department's main aim is to improve the quality of the livestock by controlling overstocking. This policy is bearing fruit, and the amount of meat, fresh and preserved by canning and drying, which is being eaten by the local population increases annually. Unfortunately, the low income of the average African does not allow daily meat-eating.

The European-owned sheep are wool sheep of the Merino, Corriedale, Romney Marsh, or Down breeds. They number rather less than ½ million head, but because of the flourishing wool industry, the numbers are increasing rapidly. Almost all the African sheep are local hair breeds kept only for meat and "bride price," and they number over 7 million.

There are 7 million goats too, all owned by Africans and kept for the same purposes as the sheep. The African goats are primarily browsers and can be seen standing on their hind legs eating the thorn branches of the desert country. They are not milked since they yield less than a cup a day, but they furnish excellent kid leather and their skins are exported to many countries, the United States being the chief buyer. The poor pastoralist may depend on them for his whole cash income, as each year sees 2 million goat and 2¼ million sheep skins exported from Kenya.

Vast areas of Kenya are too dry for any form of cultivation and, in these arid semideserts, livestock thrive in great numbers. The indigenous Kenya zebu is a fine beef animal, sturdy and well adapted to the climate and coarse forage of these equatorial steppes. And nowadays the great killing diseases such as rinderpest, pleuropneumonia, and tsetse-borne "nagana" have been checked, and dams, boreholes, and tanks enable regular watering of stock. Also, the beginnings of proper ranch management have come. These are all necessary preludes to moving from quantity to quality. There is little doubt, therefore, that under skilled guidance the productive potential of Kenya's livestock can be increased rapidly, insuring a better way of life for the stockowner and a better economy for the country as a whole.



Photographs from Kenya Info. Dept. and Gordon

Top, Santa Gertrudis bulls recently imported from Texas on the ranch of Miles Fletcher in the Ngobit area. Above, Fletcher and his wife examine their flock of Merino sheep.

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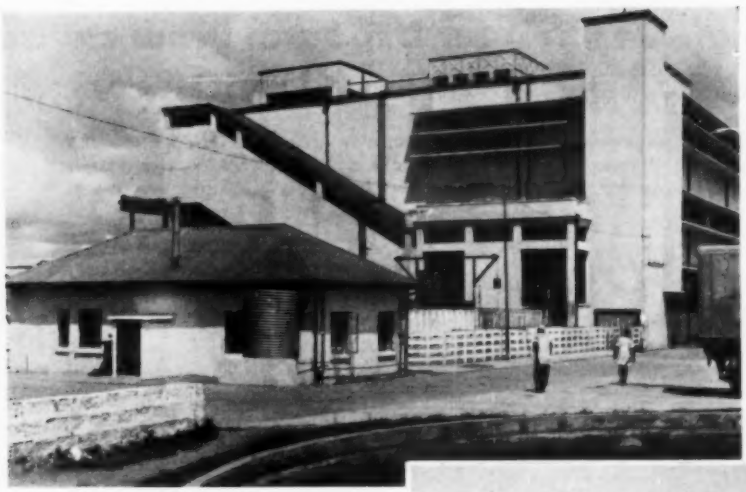
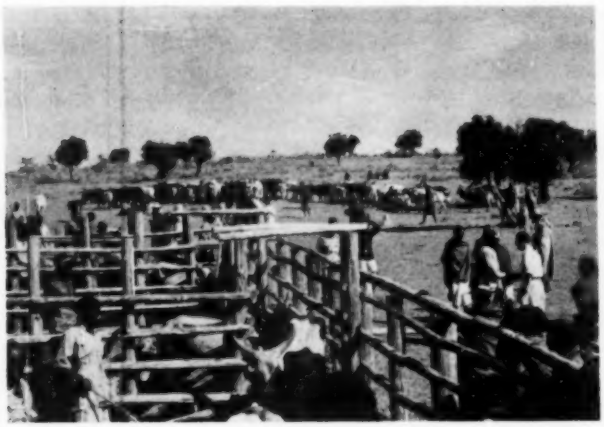


Above, Kenya Meat Commission Plant near Nairobi where only the best animals are slaughtered. Right, workers at a field abattoir load bone and meat meal made from very poor-quality cattle.



Left, Samburu tribesmen bring their cattle to a local stock sale at Maralal. Below left, a few of Kenya's 7 million goats; below right, typical scrawny Zebu cattle.

Foreign Demand for U.S. Farm Products Expected To Rise During Next 10 Years

The Foreign Agricultural Service recently revised its projections of supply and demand for farm products abroad in 1965 and 1970. The implications for U.S. agricultural exports are summarized here.

Agricultural production in foreign countries is expected to increase somewhat faster than population in the next 10 years. Consumption per capita of farm products, however, will probably increase sufficiently so that import requirements from the United States are likely to be larger in 1970 than at present. In terms of value at constant prices, the projected rise in U.S. agricultural exports over the record 1959-60 level amounts to about 15 percent by 1970.

These trends in production, trade, and consumption are probable provided that the political and economic climate in the world undergoes no marked change during the 1960's. To be more specific, the projections rest on the major assumptions that—

- There will be no large-scale war or business depression;
- The growth in population will continue at about the rates of recent years;
- Present policies of agricultural protection in importing countries and agricultural promotion in exporting countries will continue;
- Agriculture will receive at least as much emphasis as now in the economic development programs of underdeveloped countries;
- And outside aid for economic development in the underdeveloped regions will continue at a rate at least as high as in the past few years.

Feed grains and fats and oils account for most of the projected rise in U.S. agricultural exports over the 1959-60 level. Though cotton exports are not expected to increase as much as total agricultural exports, projections indicate a sharp rise over the average for the 6 years ending in 1959-60.

U.S. exports of wheat and rice, on the other hand, may not greatly exceed the average for the past 6 years. The trend in foreign demand for U.S. wheat and rice is particularly difficult to assess, since so much depends on decisions of the Soviet Union and Mainland China.

Projections of foreign supply and demand for wheat have been based on the assumption that Soviet wheat exports to the foreign Free World will not greatly exceed the average of recent years. However, during these years the Soviet Union has greatly expanded its wheat acreage. If this acreage is maintained and there is no prolonged drought cycle, the Soviet Union could export much more wheat per year to the foreign Free World in 1960-70 than it did in 1956-59 and still have ample quantities available for domestic use and for export to the Soviet satellites. Whether the Soviet Union actually increases its wheat exports to the foreign Free World will depend not only on the level of production but also on the political and economic advantage to be gained by such increases. The same holds true for Mainland China and rice exports.

In any event, temperate North America and Oceania will remain the major wheat-exporting regions of the Free World. Australia and New Zealand are also expected to increase exports of livestock products.

Western Europe will continue to be the great commercial outlet for exportable surpluses of most farm products from other regions of the world. Though food production per capita may increase faster than food consumption during the next decade, the region is likely to need increased quantities of imported fats and oils and feed grains. A substantial part of the West European livestock industry is based on imported feed, and this industry is expected to expand in response to increased demand for livestock products. As in other economically advanced regions, increased per capita consumption of the more expensive foods will probably be accompanied by a continued decrease in per capita food grain consumption.

In the underdeveloped regions, however, the demand for food grains as well as for other foods is expected to be maintained or to increase. Most countries in these regions have development programs, but they need outside financial and technical assistance as well as time in order to realize their agricultural potential. Progress will be made in expanding agriculture but probably not enough to narrow the gap between production and consumption of food grains. The Far East, Africa, and Latin America account for the projected increase in the foreign Free World's wheat and rice deficit; the Far East alone is expected to need more imports of wheat and rice (commercial and concessional) than Western Europe in the years 1965 and 1970.

The projections also indicate for the next decade increasing net imports of coarse grains and cotton in the Far East and of fats and oils in Latin America and Western Asia. Though Western Asia's deficit in wheat and rice will probably decline, it is expected to be still substantial in 1970. In this period, these regions should increase net exports of a number of major foreign exchange earners, such as coffee, sugar, and cotton in Latin America, fats and oils, cotton, and cocoa in Africa, and rubber and tea in the Far East.

One of the striking implications of these projections is that highly industrialized areas will continue for a long time to supply food to undeveloped agricultural areas that had commonly been supposed to be able to feed themselves. This is perhaps not so odd if it is considered that the new agricultural techniques may have increased the comparative advantages of highly developed countries for agricultural production. Agricultural productivity rises more rapidly in the developed countries, which can more easily afford the needed large capital investment than can underdeveloped countries.

Note: Projections of net imports and exports by region for the main commodities are available in a paper prepared by the Foreign Agricultural Service, June 1960, entitled "Foreign Free World: Supply and Demand for Farm Products, 1965 and 1970." The term Far East includes the non-Communist countries east of Iran.

Soviet Food Levels

lag well behind those of the U.S.

Above, a familiar sight through the Russian countryside are posters urging farmers to higher output. Left, a state-owned food store.

By Richard E. Bell
East European Analysis Branch
Foreign Agricultural Service

Chairman Khrushchev said in Novosibirsk on October 19, 1959, "unless the stomach would refuse it . . . we can well secure for every Soviet man five American rations." Yet in spite of rapid growth in Soviet farm output and expanding foreign trade in recent years, most of the population of the USSR is still limited to a diet consisting largely of bread, potatoes, and soup. The average American has at his disposal 3 times as much fresh fruit, eggs, and edible fat and twice as much meat and sugar as the average Soviet citizen does, and a third more milk and milk products and fresh vegetables. And, though the quality of his diet is higher, the average American spends much less of his income on food than does the average Soviet citizen.

By Western standards, the Soviet diet is monotonous and heavily overladen with starchy foods. Computations based on estimates of farm production and trade data indicate that in 1958 over half of the caloric value of the food supply was derived from flour and cereal products and about 10 percent from potatoes. Also, in terms of pounds consumed per person, the average Russian is eating almost 3 times as much flour and cereal products and over 3 times as many potatoes as the average American.

The caloric value of the Soviet diet is estimated at less than 3,000 calories a day. This breaks down to 65 percent supplied by grains and potatoes, 15 percent by animal protein foods (meat, milk, eggs, cheese), 10 percent by fats and oils, and nearly 10 percent by sugar. The diet also includes substantial quantities of vegetables, but consumption of fruits is low.

Aware of Lag. The Soviet Government has long been aware that a more satisfactory diet is a pressing problem in the USSR. As early as September 1953, Chairman Khrushchev said at a plenum of the USSR Central Committee of the Communist Party, "We must achieve a level of consumption based on a scientifically substantiated diet essential for the all-round harmonious development of a healthy human being."

The Soviet leaders recognize that the level and structure of a people's diet are standards often used for international comparisons to indicate the well-being of populations within the world's various political entities. And by these standards, it is readily evident the Soviet population is lagging behind the peoples living in the United States and other more highly developed countries of the West.

This lag is a reflection, in large part, of the course by which the Soviet Government has chosen to develop the economy. During the many years under Stalin, the welfare and comfort of the people were subordinate to building a state-operated economy with a broad industrial base. Overemphasis on industry retarded the development of agriculture, which had to contribute heavily to industrialization programs, and net exports of food rather than net imports were the rule. As a result, the diet of the Russian people suffered.

With the death of Stalin in 1953, there came a shift in Soviet economic policy. More attention was given to the consumer, and farm policies were modified to give agriculture better treatment. Food imports were increased, but they remained small compared to exports and raised the calorie value of the food supply only slightly. Because of increases in production, however, food supplies became more plentiful and changed in composition between 1953 and 1958.

During this period, according to Soviet sources, average per capita consumption of bread grains, in flour equivalent, dropped 7 percent and potatoes 13 percent, while per capita consumption of vegetable oil increased 16 percent, vegetables 19 percent, meats 20 percent, sugar 25 percent,

fish 29 percent, milk and milk products 36 percent, and eggs 28 percent. Though some of these increases appear exaggerated, there is no doubt that Soviet food consumption levels have improved. They still remain well below the standard set by Soviet norms.

Food Norms. In devising a plan to achieve a more satisfactory diet for the people, the Soviet planners have established what they call "physiological or rational food norms," and from these they have computed "rational" levels of per capita consumption for the various food commodities. Also, on the basis of these food norms they have drafted what they consider a suitable diet structure. This diet is very similar to the one now enjoyed by the average American.

In this projected diet, bread products will supply only 35 percent and potatoes 6 percent of the daily calories consumed by the average person. Twenty-one percent is to come from milk and dairy products, 12 from meat, 11 from sugar, and 5 percent from vegetable oils. Fruit will be the source of 4 percent of the daily calories and vegetables another 3 percent, while eggs will contribute 2 percent. The small remainder will come from fish and other foodstuffs.

Allowances have been made for differences in various economic and geographic regions in the projected consumption norms, but as farm output rises, the Soviets expect territorial differences of level and structure of food consumption to gradually disappear. This appears questionable. The Soviet Union has a heterogeneous population with at least 185 nationalities and over 150 racial groups, and each ethnic group has its own dietary habits, tastes, and preferences which are not likely to be altered easily.

Food Costs. The Soviet people not only have a lower quality diet than the American diet, but they have to work considerably longer to acquire it. Despite the rise in farm output, food is a relatively high-cost item in Soviet family budgets.

A study by the U.S. Department of Labor [1] indicates that the average workman living in Moscow in 1959 and supporting a family of 4 had to use 62 percent of the legal 46-hour work week to earn an adequate supply of 7 essential foods (bread, potatoes, beef, milk, eggs, butter, sugar). This study also reveals that in terms of food-purchasing power, real earnings of the average worker in 1959, though higher than in 1953, were still below the peak of 1928. The average Moscow worker had to work 8 percent longer in 1959 than in 1928 to buy his family the same weekly supply of the 7 essential foods. In 1928, the government permitted more private trade in food than now, and the agricultural crisis precipitated by forced collectivization had not yet begun.

Also relative to 1928, eggs, milk, rye bread, and sugar were more expensive in the USSR in 1959, but potatoes and butter had become less expensive. Beef cost about the same. In terms of worktime required to purchase a week's supply, eggs were 2.9 times more expensive and milk 2.5 times in 1959. Rye bread cost 18 percent and sugar 10 percent more worktime, while the cost of potatoes had dropped 15 percent and butter 20.

Meeting the Goals. The Soviets apparently do not expect to acquire the diet outlined by the rational food norms by 1965 when the current 7-year plan terminates, but they do expect to be well on their way, to judge by the goals set for agriculture. Between 1958 and 1965, total farm output is to increase by 70 percent, with milk up 70-80 percent, meat up 100 percent and fruit up 100 percent.

Hopes of reaching the farm output goal rest mainly on increasing crop yields and providing adequate feed for an expanding and higher yielding livestock population. Both present major difficulties, in view of the uncertain Russian weather, the Soviet collective farm system, and an economic policy that still emphasizes the development of heavy industry. Even if Soviet policy were again shifted more in the direction of giving greater incentives to farmers, increases in food production sufficient to meet consumption goals appear unlikely for some time to come.

[1] Nash, Edmund. "Purchasing Power of Workers in the USSR." *Monthly Labor Review*, Bureau of Labor Statistics, U.S. Dept. of Labor, April 1960, p. 359.

U.S. and Italy Lead In Tomato Processing

During the last marketing season, the United States grew 3.5 million short tons of tomatoes for processing and another 980,000 tons for the fresh market, while Italy, its nearest competitor, had a total tomato output of 2.4 million tons. This is remarkable only because the United States is a comparative newcomer to the tomato industry, being the last country to accept tomatoes as an edible product.

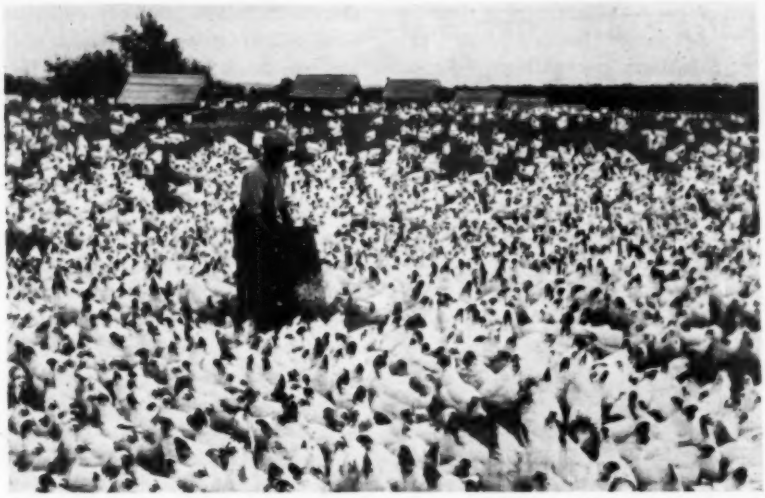
Tomatoes—once called love apples—are native to Latin America, where they grow wild at moderate elevations in the Andes Mountain regions. They were carried to Italy by returning explorers around 1550 and reached the United States via Europe. They were not commonly eaten in this country, however, until after 1825 and, as late as the early 1900's, they were still believed by some people to be poisonous in their raw state.

Today a large share of commercial tomato production is destined for processing. The United States and Italy are the world's leading tomato processors. Although the U.S. industry is by far the world's largest, Italy's is growing, along with its total tomato production which has risen substantially in the last decade.

The U.S. and Italian industries differ sharply in one respect. In the United States, most tomatoes are processed in a few large plants, while Italy has over 500 factories, and all but about 20 are small family operations.

Despite its large production, the United States still imports 2 million to 3 million cases of canned peeled tomatoes annually—nearly all from Italy. All these imports are the "Italian type" pear-shaped varieties, considered a specialty item and in demand principally among people of Mediterranean origin. Italy also ships tomato products to the United Kingdom.

The largest volume of U.S. exports is tomato juice, but this country also ships large quantities of tomato paste, puree, and canned tomatoes. Over half are exported to neighboring Canada, but small amounts of U.S. tomato products reach almost every country of the Free World.



Poultry (above) and hogs (right) are subjects of Canada's experiment with new type of deficiency payment, aimed at maintaining prices without stimulating production.

Canada Tries New Plan

to support farm prices while limiting output

By Larry F. Diehl, Assistant U.S. Agricultural Attaché Ottawa, Canada

During the past year, Canada has been experimenting with a new kind of deficiency payment to support the prices of hogs and eggs. Similar programs have been used before from time to time in Canada, but the new type differs radically from all previous ones in that it limits participation. Payments are made only to registered producers, are kept at uniform rates throughout the country regardless of local market prices, and are limited to total marketings of 100 hogs or 4,000 dozen eggs by any one farmer during a year. These limited-participation features result from the government's desire to bring Canadian production of hogs and eggs more into line with domestic and normal export markets.

It was against the backdrop of increasing overproduction, mounting government purchases, a nonremunerative export market, and overburdened storage facilities that the Canadian Government early in 1959 began to talk of measures to correct the situation. The new programs were framed not only (1) to provide farmers a standard of living comparable with that enjoyed by workers in other occupations and (2) to insure food production sufficient to meet domestic and export needs, but also (3) to avoid extreme overproduction and at the same time (4) to guarantee widespread distribution of the cash returns from the limited output.

Program Details. Under both programs, deficiency payments are made directly to the farmer and are based on the amount by which the "national average annual price" falls short of the National Average Support Price for the product. This annual average price is the weighted average price received for Grade "A" hogs marketed through commercial channels or for Grade "A" Large eggs marketed through registered egg-grading stations. All hog or egg producers in Canada therefore receive the same rate of deficiency payment.

For the hog program, the annual average price, calculated on the marketing year beginning January 11, 1960, is measured against the National Average Support Price of $22.65 (equivalent to $23.65 per hundredweight, warm dressed weight, for Grade "A" carcasses at Toronto). Payments to any one farmer during the year are limited to total marketings of 100 Grade "A" and "B" quality hogs through official grading establishments.

The mechanics of the egg program are similar. The annual average price, calculated on a marketing year beginning October 1, 1959, is measured against the National Average Support Price of 33 cents per dozen, and payments to any one producer during the year are limited to total marketings of 4,000 dozen Grade "A" Large and Extra-Large eggs.

The new programs were generally accepted by hog producers and opposed by egg producers—a natural reflection of the basic differences between the two enterprises in Canada. Egg producers denounced bitterly the limitation of support to 4,000 dozen Grade "A" eggs, which would bring an average gross income of only around $1,300, while 100 Grade "A" and "B" hogs would bring around $3,600. The egg program, however, is designed specifically to discourage the excess production which normally comes from big units. Many egg producers will now receive support on only a small part of their total output. On the other hand, a relatively large number of hog producers have herds that already come under or can easily

be adjusted to a ceiling of 100 hogs, so that nearly all of their production comes under support, particularly if they are marketing high-grade hogs.

Hog Program. Announcements on the program have been reflected in prices and production at every stage. In March 1959, the government announced that the $25 support on hogs would drop to $23.65 after October 1. Simultaneously it announced that the Agricultural Stabilization Board was to devise a new deficiency-payment program to take effect as soon as practicable. After these two statements, intended hog farrowings, which for March-May 1959 had indicated a 16-percent increase over the corresponding period a year earlier, were cut to a figure below the previous year's. It must be assumed that a large part of this cut was due to second thinking by producers after the program was announced. There is evidence too that with the loss of the guaranteed hog market the large feed companies producing hogs through a number of farms on a contract basis no longer considered this operation a good risk.

The government ceased purchasing hogs on January 9, 1960, and the deficiency-payment program became effective on January 11. After that, prices began to slide, and still more producers changed their minds about raising hogs. Prices, which had held at support levels while the purchase program was in effect, fell off to a low of $19 Grade "A" Toronto by March 5. Hogs on farms as of June 1 this year were down 20 percent as compared with a year earlier, and hog marketings for the first 8 months were down more than 16 percent. In June, the Canadian Department of Agriculture forecast a reduction of 31 percent in marketings for the third quarter of the year as compared with 1959, and one of 27 percent for the last quarter —usually the heavy marketing season.

During the first months of 1960, graded slaughter continued to exceed current requirements, but in May slaughter fell below requirements, and it continued to drop further each month. During the third quarter of the year requirements exceeded inspected slaughter by 20,000 head a week, a 15-percent deficiency. Lower production not only improved the market and pushed Toronto prices from the $19 March low to a high of $28 in July, but provided an opportunity for reducing—without market disruption —the huge stocks of pork products accumulated under the purchase program. Through various means—and at considerable cost to the government —stocks were reduced from around 169 million pounds as of January 11 to around 91 million on July 11, and by October the Board was practically out of the pork business.

In fiscal 1959-60, the net cost of the hog purchase program was nearly $28 million—by far the most expensive to the government in many years. Further, stocks held by the government at the end of that year were valued at about $73 million, about $30 million of which was lost in disposal. It can be assumed, therefore, that the total cost of the hog purchase program in its last year of operation was in excess of $50 million.

Unless hog prices decline in the last quarter — which appears very doubtful—a deficiency payment will not be necessary, since the annual average price for the year ending January 11, 1961, will be higher than the National Average Support Price of $22.65. The new program, therefore, represents a considerable saving.

Egg Program. The government announced the egg program in May 1959—giving its effective date only as "soon." Then, in late August, farmers were informed that the Stabilization Board would discontinue purchases of eggs on September 30, and that the deficiency-payment program would become effective October 1.

The announcement was first reflected in hatchings for egg production, and it was apparent that many producers had decided to reduce their operations. The June hatch dropped off only slightly, but hatchings were 26 percent lower for July through February 1960 than for those months of 1959. The larger producers did not make replacements during that period, and with little buildup of flocks in the first half of 1960, the laying flock of June 1 was 6 percent below that of the previous June. As of mid-July, egg production was running some 12,000 cases per week less than in July 1959 and total production was down about 10 percent from the year before. The government noted with evident satisfaction that production was at last reasonably in line with Canada's consumption needs.

Prices, however, have not reached anywhere near the high levels predicted last year. On the contrary, though they held at the support level during the first 3 months of the program in 1959, they have been below that level for a large part of 1960. An interim payment of 8 cents per dozen on a maximum of 1,000 dozens per producer was made for January-March; average producer prices reached a low of 16.8 cents in mid-January when producers in the Prairie Provinces were selling eggs at 12 to 13 cents. Low supplies strengthened the market in the latter part of February, and average producer prices have held up fairly well since then. By September 30, end of the egg-marketing year, the cumulative national average price was very close to 31 cents per dozen, requiring a total deficiency payment of a little over 2 cents per dozen. In view of the interim payment made early in the year, any additional payment will be very small.

While stocks of shell eggs have been burdensome at times during the past few years, particularly in 1957 and 1959, they never presented as much of a problem as pork stocks did, largely because of the Venezuelan export market. One result of the higher prices that began in February was the drastic curtailment of this market, which Canadian shippers had enjoyed all through the purchase program.

The net cost of the purchase program for eggs, which was in operation for only half of the last fiscal year, was $4.8 million, but there were indications that it would have grown steadily to much larger proportions. The total egg deficiency payment due for the poultry year ending September 30, 1960, was between $2 million and $2.5 million—again, a substantial saving to the taxpayer.

Results and Prospects. The hog program has largely achieved its aims. It might not have been so successful but for the historic pattern of hog

production that prevails in Canada, the choice of an acceptable and practical economic unit of production per farm, and the fact that the program began at the peak of a hog production cycle. However, the government is out of the pork business, production is more nearly in line with consumption, prices to producers are being kept at satisfactory levels, no major adjustments have been forced upon the hog industry as a whole, and most producers have no serious complaints.

Prospects for the egg program are quite a different matter. On the positive side, one can say—just as for the hog program—that production has been brought more in line with consumption. However, it is significant that adverse criticism is still widespread. A large number of producers are dissatisfied with the level of support provided. The many small producers in the Prairie Provinces who sold eggs at 12 to 13 cents a dozen in January—and whose deficiency payment will be calculated on the national average market price—could hardly be expected to feel enthusiastic over the small payment they are likely to receive under the deficiency program. Because of the numerous small farms involved, there are strong political overtones in the egg picture, for the "family size" farm is no less sacred in Canada than elsewhere.

As a result of the program's limiting assistance to the output from roughly 500 hens, the production and marketing of eggs in Canada may undergo considerable change. Regardless of the original intent of the program, some small producers may be forced out of commercial production and other producers either into the 500-hen group or into the large "egg factory" group where savings through production efficiency may overcome price handicaps. Many of the operators of smaller flocks, especially in the Prairies, are likely to go out of commercial production. Significantly, in the first half of 1960 the reduction in eggs set in incubators was 50 percent more for the Prairies than for the country as a whole. Further, the percentage reduction in receipts at registered egg-grading stations has been substantially larger in the Prairies than in other areas. The government has already forecast that under the deficiency-payment program the trend will be toward fewer but larger egg-gathering and egg-grading establishments.

The hog and egg programs have without doubt already reached two of their goals—namely, to reduce burdensome and unmanageable government surpluses of pork and eggs, and to tailor production of these commodities more nearly to domestic and normal export needs. Without doubt, also, the cost of the program to the government—at least in the short run—will be far smaller than was the cost of support through purchase. However, the overall cost of large-scale national programs cannot be measured in terms of dollars alone. Consideration must also be given to longtime effects on the agricultural economy—to adjustments and reorganizations of the farm community which may be end-products of the programs and which may or may not be desirable from the national viewpoint. But it is still too soon to assess these longterm aspects.

U.S. Now Exporting Lentils, Whereas A Few Years Ago Its Crop Was Small

Shortly after World War II, the United States became the world's largest exporter of beans and the third largest of dry peas. The latest U.S. agricultural success story concerns another legume, the common lentil, one of the world's oldest domesticated crops and the basic ingredient of Europe's most popular soup.

Lentils are a relatively new crop in the United States and are grown in the Palouse area of Washington and Idaho. For about 30 years U.S. farmers produced only nominal quantities of lentils. Then in 1957 acreage started expanding. By 1959 production had soared to 150,000 bags (100 lb.), and expectations are that it will double this year.

Compared to the annual crops in the big lentil-producing countries, U.S. output is small. Before the war Russia was producing around 6 million bags and may still be doing so, although no recent figures are available. India grows over 4 million bags, Pakistan 2 million, and Ethiopia, Turkey, and Egypt slightly over a million.

What is important about U.S. production is not its volume but its rapid rise which caused this country to shift from a net importer to a net exporter. During the 1940's the United States imported from 70,000 to 100,000 bags of lentils a year, mainly from Chile and Argentina; then in the late 1950's imports dropped to as low as 15,000 bags. In both countries a rust, *Uromyces*, had infected the lentil crop. While the loss has not been too severe in Chile, Argentina's output has fallen off 80 percent and its exports have dropped from 400,000 bags a year to around 30,000.

Beginning around 1957, partly because of the shortage of lentil imports from these two countries, lentil prices in the United States rose sharply, stimulating U.S. production. Also, in May 1959 the United States embargoed lentil imports from Latin America to prevent introduction of the rust, and this action made the U.S. market virtually dependent on domestic output. (The other closest source of supply is the Mediterranean area.)

In 1957 the United States shipped abroad the first lentils to be reported —11,000 bags—and by 1959 these shipments had increased to 70,000 bags. It is quite possible that exports were even larger since these figures cover only the imports acknowledged by the recipient European countries.

U.S. lentils face considerable competition abroad. While the largest lentil-producing countries do little international trading in lentils, Syria, Turkey, Morocco, Lebanon, and Ethiopia are all important lentil exporters, as are Argentina and Chile when their crops are not reduced by rust. The lentil import market is highly concentrated in Western Europe, with West Germany, France, and the United Kingdom the leading buyers.

Lower Commonwealth Tariff Preference Seen As Aiding European Cooperation

A study published in London this summer sheds light on the question of how important Commonwealth tariff preference actually is in British trade. *Commonwealth Preference in The United Kingdom,* issued in August by Political and Economic Planning, reveals a gradual downward movement over the past two decades in the margin of tariff preference Britain has been giving to imports from Commonwealth members.

Coming at a time when closer U.K. ties with the Continent are under serious consideration, this study has brought forth comment in the British press to the effect that Commonwealth preference should no longer present insurmountable obstacles to closer economic collaboration with the countries across the Channel.

In recent European efforts to find a framework for tighter economic ties between the Common Market and the other European countries—specifically those in the European Free Trade Association—this Commonwealth preference has usually been considered a major problem. It has been thought next to impossible for the United Kingdom to join in any European trading arrangement—such as that of the Common Market—which by its nature would prevent the continuation of the Commonwealth preference system. EFTA, in which the United Kingdom is joined with Austria, Switzerland, Portugal, and the three Scandinavian countries, offers a looser form of cooperation permitting each country to maintain its own external tariff policy.

The new study compares the situation that existed in 1957 with that of 1948 and 1937 as disclosed in an earlier study. It reports that in 1957 the average margin of preference on all goods imported into the United Kingdom was between 4 and 5 percent, and compares this with figures of 6 to 7 percent for 1948 and 10 to 12 percent for 1937. These earlier figures come from the only previous quantitative analysis of Commonwealth preference—that by Sir Donald MacDougall and Mrs. Rosemary Hutt in the *Economic Journal* of June 1954.

The study also shows that just under half of all imports from the Commonwealth in 1957 received preference. The average margins of preference on foodstuffs (excluding sugar which comes under the Commonwealth Sugar Agreement) was 6 percent; that on raw materials 2 percent; and that on manufactured goods 12 percent.

The six largest Commonwealth exporters — Australia, Canada, India, New Zealand, South Africa, and the Irish Republic—received margins varying between 3 and 7 percent. High margins were enjoyed by Hong Kong (about 17 percent) and the Channel Islands (about 20 percent).

The margin of preference Britain grants the Commonwealth has become narrower because of reductions in the general tariff rates—those applying to countries outside the Commonwealth. Also, the importance of the specific duties charged on some products has been lessened by rising prices on the products in question. These trends have reduced the value of the preferential system to those who enjoy its advantages.

Big West German Market

(Continued from page 10)

have an important influence on the future German market, for these tobaccos will ultimately be imported free of duty.

Honey. Germany is one of the largest importers of honey in the world and certainly the best customer for U.S. export honey. While subject to controls, honey imports have been handled in a rather liberal (global tender) way for a number of years and were fully liberalized on January 1, 1960. If the important German market is to be maintained, U.S. exporters will need to give careful attention to considerations like quality, price, trueness to color, and avoidance of overheating.

Outlook. While Germany has reached partial or complete self-sufficiency for some important farm products (rye, milk, potatoes, pork, butter, and sugar), it must import about 30 percent of its total food requirements. In addition, it imports large supplies of fibers, tobacco, and hides and skins, and small quantities of a few other agricultural raw materials. In 1959, Germany bought from foreign countries agricultural commodities valued at approximately $3,187 billion, of which it needed $736 million worth (about 23 percent) for industrial use.

With Germany's economic health and favorable foreign exchange position, and with many of the trade deterrents of the postwar period removed, U.S. farm exports would appear to have a good chance for expansion. But whether this expansion will occur is dependent on many circumstances. A major one is the effect the European Economic Community will have on trade. Neither the internal agricultural policy of the Common Market area nor the procedures affecting imports of agricultural products have reached final form. While the proposed controls being considered by the Community do not appear more restrictive than similar German controls, it remains to be seen what their effect on Germany's trade with countries outside the Community will be. Another circumstance is the bilateral trade agreements and whether they will be abolished, as is now proposed under the Common Market.

Regardless of what happens under the Common Market, the German market for farm products will need the coordinated attention of all interested U.S. groups, for it is a buyers' market, and competition is keen. The U.S. Government and U.S. commodity trade groups will need to pool their efforts to get relaxation of the remaining German trade restrictions. The commodity groups will have to carry on effective market development programs. Farmers and exporters will have to cooperate by supplying the kinds and quality of products required by the German consumer. Last but not least, U.S. farm products will have to be competitive in price if they are to share fully in the German market.

Grinning happily new 4-H Club boys get their pigs. From their first litter a percentage is given to other clubs interested in pig-raising. Many of these hog projects got their start 5 years ago from Texas sows.

Korean Youngsters Learn How To Raise Pigs

in 4-H Club projects backstopped by U.S. technicians

Food from U.S. farms is part of the current answer of helping less fortunate peoples, but what they do for themselves is, in the long run, even more important. This is the thinking that motivates U.S. technical cooperation with underdeveloped countries; and a good example of its effectiveness is Korea's 4-H Club movement.

A few years ago probably nobody in Korea had ever heard of a 4-H Club. Today there are over 7,000 such clubs, and a half million Korean boys and girls belong to them. And like all 4-H Club youngsters they are involved in various farm projects, but the raising of pigs is by far the most popular. Poultry is another favorite.

For these potential farmers livestock-raising is a great adventure, but for their families it is serious business. Formerly, the Korean farmer earned some 70 percent of his income from his rice paddy, and livestock as a source of income was almost unknown to him. Now he understands that hope for the future lies in diversified farming, with the result that last year less than half his earnings came from rice.

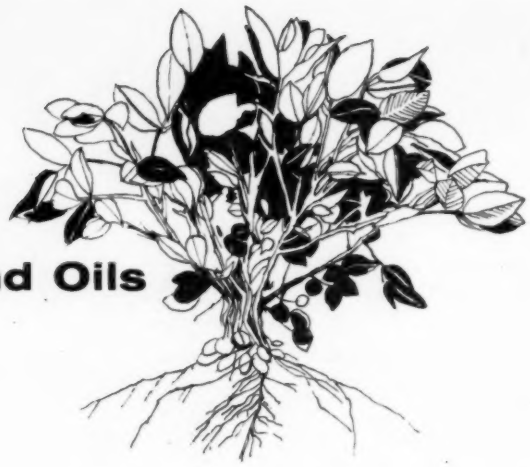
There were only 195,000 hogs in Korea when U.S. technicians with the International Cooperation Administration started to help organize 4-H Clubs and to train extension agents. By 1959, the number of hogs had jumped to 1.3 million, and poultry had increased from 1.5 million birds to 13 million. That year saw Korea exporting eggs, poultry, and hogs to Hong Kong.

Before receiving pigs, boys are given basic instruction in hog-raising and must promise to teach other new members.

Erecting their club banner on a waste hillside, members make a project out of reclaiming and planting the land.

The Future for India's Fats and Oils

By Edward Quiñones
Fats and Oils Division
Foreign Agricultural Service



India's prewar position as a leading oilseed and oil exporter has been reversed. Even though the country is growing more oilseeds and producing more oil, output cannot keep pace with the soaring population and rising consumption per person. Thus, in recent years, the country has become a small net importer.

Crops. Peanuts are India's major oilseed crop, and the country is the world's No. 1 peanut producer. Peanut acreage has been expanding steadily for 60 years or more and in acreage the crop is now seventh in importance. The 1958-59 crop set an alltime record of 4.8 million long tons; the 1910-19 average was only 700,000.

Probably the principal reason for the long continued uptrend in peanut acreage is its return per acre compared with other crops. Costs of growing are not much higher than those of other nonirrigated crops, and the returns are higher than those of grain sorghums (jowar)—the most competitive crop—and other crops, such as millets, sesame, and corn.

Several members of the *Brassica* family—popularly called rapeseed and mustardseed — comprise the second most important oilseed crop raised in India. These are raised as a winter crop in northern India, with about half the acreage located in Uttar Pradesh. Acreage has fluctuated between 5 million and 7 million acres since 1900. Almost 2 million acres are in what is now Pakistan. Since partition, the acreage in India has been rising and has averaged 6.2 million from 1956 to 1959.

Rapeseed and mustardseed do not seem to be particularly profitable; the return is less than that of wheat. In some areas they are more lucrative than barley and gram (chickpeas), but in others they are less gainful than barley and return about the same as gram. In northern India, however, the particular flavors and qualities of rapeseed and mustardseed are highly desired by consumers, and this factor encourages their continued upward trend in acreage.

India is the world's leader in sesame acreage, accounting for 44 percent of the total. However, it only produces 26 percent of world supplies, because of low per acre yields.

Castorbeans are India's primary source of inedible oil, but most castor oil is sold for export. A large quantity of linseed oil, on the other hand, is used edibly, and export demand must compete for the supply. Coconut oil too has a dual purpose, being used for soap as well as food. India imports nearly a fifth of its copra—for making coconut oil—and a moderate tonnage of palm oil for soap.

Target. On the eve of its Third Five Year Plan, the Indian Government has set an optimistic production target for its five major oilseeds of 9.2 million long tons by 1966, the end of the Third Plan. This would represent an increase of 3.1 million tons over the average for 1957-58. The government hopes to reach the 1966 target through higher per acre yields. India's oilseed yields per acre are among the lowest in the world. Irrigation projects initiated during the Second Plan plus more intensive cultivation are the means by which it intends to reach its objective.

There are, however, a number of hindrances in the way of these goals. Lack of capital is one. Also, climatic conditions play an important role, for wide year-to-year and seasonal fluctuations in rainfall result in broad variations in yields. Soils, too, are a limiting factor. Much of India's soil is in poor condition because of leaching, termite action, and a lack of restorative crops and organic matter. Some areas have been producing for centuries without ever having been fertilized; and in addition, overgrazing and monoculture have accelerated soil erosion in some areas. Although chemical fertilizer use has risen sharply in the last decade, the overall amount of expansion has been small compared with total needs. Priorities for fertilizer application are usually given to sugarcane, rice, and other grains.

Outlook. Because of these difficulties, oilseed production by 1966 may reach only 8.4 million tons, an increase of more than a third over 1957-58. But even if this figure is reached, the country may still need large imports of vegetable oils.

Per capita consumption of all fats and oils—averaging 12.2 pounds in 1957-58—is far below that of most Free World countries. Incomes are rising, and as they go up, the people will want more fats and oils. But rapidly expanding population will tend to drain supplies. Thus, only by continuing imports can India hope to satisfy the increase in demand.

TRADING POST

Australia Buys Hides From U.S.

Australia, normally a substantial exporter of hides and a U.S. competitor in world hide markets, has bought 5,000 pieces of wet salted hides from the United States. The country's leather industry has been faced with a hide shortage because a long-term drought has resulted in lowered cattle slaughter.

Australian cattle slaughter so far this season has been substantially below last year's levels. And although there has been adequate rainfall in some areas, the main cattle State—Queensland—is still very dry.

India Releases Sugar For Export

India, prompted by its record production of refined sugar in the 1959-60 season, has released 56,000 short tons of it for export through the Indian Sugar Mills Association.

The f.o.b. price (excluding taxes) of Indian refined sugar is 2 to 3 cents a pound higher than the international price. Provided India sells at international prices, prospects are considered good for sales to Malaya, East Africa, the Persian Gulf, and some countries of the Middle East. However, no decision has been made as to how to make up the financial loss if India sells at such prices.

Thailand Passes Bill To Control Export Quality

The Thai Government has passed a bill placing standard and grade controls on export products. A Standardization Board will be established in the Ministry of Economic Affairs and decrees will be issued naming the goods to be placed under its control.

Thailand's main export crops are rice and rubber, with rice accounting for about 60 percent of export earnings and rubber, about 20 percent. Cassava and corn are also important trade items. About 90 percent of U.S. purchases from Thailand are rubber.

The new law results from numerous complaints about the quality of some Thai exports and the practices of some exporters. Exports of controlled goods will be limited to firms which have been inspected and approved.

USSR Having Difficulty Refining Cuban Sugar

An official Russian publication indicates that the Soviet Union is having difficulty in refining sugar imported from Cuba. The article refers to the "overloading of refineries which are undergoing reconstruction."

Presumably, Soviet sugar refineries are being repaired and enlarged to prepare them for the new domestic sugar beet crop, which may be larger than that of last year. Too, the refining of the imported raw cane sugar requires different equipment than that needed to refine beet sugar. Cuba's sales of sugar to Russia in the first half of 1960—totaling 717,588 short tons—were more than double shipments during the whole of 1959.

Malaya Looking For Rice Sources

Malaya, confronted with a shortage of lower grade rice in the usual countries of supply, is now looking for rice from other sources. Commercial stocks are ample for present use, but normal import amounts — averaging nearly 600,000 metric tons in recent years—will be needed.

According to reports, Asia's supplies are tight. Although Thailand still has some high-grade rice, a smaller carryover at the beginning of 1960 and delayed planting of the 1960-61 crop are causing farmers to withhold stocks. Burma will not have substantial quantities available until the new crop begins to be marketed at the end of the year. Communist China is not even meeting its earlier commitments. Several thousand tons, now overdue, have not yet arrived in Malaya. Cambodia and Vietnam have exhausted their export supplies and are restricting sales.

Malaya has, therefore, turned to the United States to procure U.S. rice. Some orders—reported conservatively at 10,000 tons so far—have been placed for delivery over the next several months.

Australia Marketing More Inedible Tallow

Australia's inedible tallow exports in 1959-60, which totaled 180 million pounds, were 57 percent above sales the previous season and almost double the 1955-56 total. Larger supplies and improved demand in most markets have boosted shipments in recent years. The 1959-60 rise was specifically attributed to sharp increases in sales to South Africa, Ceylon, Communist China, Malaya, and Pakistan.

Australia's tallow competes with the U.S. product in the Japanese market, although its exports are relatively small compared with the U.S. total of 264 million pounds in 1959. Further, Australia's production and supplies appear to be down for 1960-61. The United States expects to gain an even larger share of the Japanese market, as a result of Japan's liberalizing tallow imports earlier this year.

Costa Rica Raises Duties On Mixed Feed Components

Costa Rica recently increased the duties on certain components of mixed feeds to protect the growing local feed milling industry and to conserve foreign exchange. Products and by-products of rice, corn, grain sorghums, broom corn, and wheat bran are affected. The United States is the main source of these components. The new duties on all such mixtures is 0.20 colones (5.67 colones = $1.00 U.S.) per kilo plus 10 percent ad valorem.

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TRENDS IN WEST GERMANY'S ECONOMIC AND TRADE POSITION

	1950	1953	1956	1957	1958	1959
	Bil. dol.	*Bil. dol.*	*Bil. dol.*	*Bil. dol.*	*Bil. dol.*	*Bil. dol.*
Gross national product [1]	24.1	36.0	48.7	53.0	56.4	[2] 60.4
IMPORTS [3]						
Agricultural:						
From the United States: [4]	*Mil. dol.*	*Mil. dol.*	*Mil. dol.*	*Mil. dol.*	*Mil. dol.*	*Mil. dol.*
Soybeans	4.7	14.9	47.3	63.8	50.5	61.0
Coarse grains	40.5	22.4	43.7	25.0	24.6	60.3
Tobacco, unmanufactured	21.1	33.2	39.5	43.8	46.5	45.4
Vegetable fats and oils	13.4	2.8	44.4	61.0	28.1	39.0
Wheat and rye	99.3	72.1	60.0	65.2	37.6	27.0
Cotton, linters, waste	124.8	47.1	49.4	163.7	71.1	26.8
Hides, skins, pelts, raw	1.5	2.5	15.1	22.2	18.4	18.6
Canned fruits, vegetables, juices	—	2.3	12.2	22.6	20.7	19.1
Animal and marine fats and oils	21.4	22.4	28.8	19.1	10.2	14.9
Meat and meat products	.8	6.8	8.2	8.4	7.7	12.4
Poultry	—	—	.7	2.0	2.6	12.4
Citrus and tropical fruits	3.4	4.7	18.8	12.5	8.7	6.1
Rice	—	—	.6	.3	1.6	5.5
Fruits (except tropical and citrus), nuts	4.0	.8	3.1	5.4	10.7	2.1
Other	13.8	5.3	19.4	17.6	18.4	25.2
Total from U.S.	348.7	237.3	391.2	532.6	357.4	375.8
Total agricultural	1,766.1	1,963.0	2,861.6	3,157.7	2,830.4	3,187.2
Industrial:						
From the United States	64.0	157.1	560.0	815.5	646.9	718.0
Total industrial	937.6	1,846.5	3,798.9	4,391.4	4,584.1	5,184.1
Total imports	2,703.7	3,809.5	6,660.5	7,549.1	7,414.5	8,371.3
EXPORTS [3]						
Agricultural:						
To the United States	6.6	25.4	21.3	22.6	23.8	[5] 26.7
Total agricultural	72.9	140.4	242.9	252.4	255.1	297.8
Industrial:						
To the United States	95.8	270.8	473.6	579.0	611.4	874.3
Total industrial	1,907.6	4,281.2	7,117.9	8,326.0	8,558.2	9,512.5
Total exports	1,980.5	4,421.6	7,360.8	8,578.4	8,813.3	8,810.3

[1] GNP at market prices. Includes West Berlin; excludes Saarland. [2] Preliminary. [3] Includes West Berlin and, since July 6, 1959, Saarland. [4] Includes Hawaii. [5] Commodities amounting to $1 million or more were as follows (in mil. dol.): Meat and meat products 2.7, beer and hops 6.3, wine 2.8, hides and skins 2.4, fish 1.1, wool and other animal hair 2.5, cocoa products 3.1, edible vegetable fats 1.0.

(See story on page 9.)